

REMARKS/ARGUMENTS

Favorable reconsideration of this application in view of the above amendment and following remarks is respectfully requested.

Claims 16-35 are pending. In the present amendment, Claims 16-30 are currently amended and new Claims 31-35 are added. Support for the present amendment can be found in the original specification, for example, at page 9, lines 1-5 and 24-31, at page 10, lines 18-20, and in Figure 1. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, Claims 16-30 were rejected under 35 U.S.C. § 112, second paragraph; Claims 16-18, 26, and 29-30 were rejected under 35 U.S.C. § 102(b) as anticipated by Zahrah et al. (U.S. Patent No. 6,402,500, hereinafter "Zahrah"); Claims 19-24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Zahrah in view of Souers et al. (U.S. Patent No. 5,296,202, hereinafter "Souers"); Claim 25 was rejected under 35 U.S.C. § 103(a) as unpatentable over Zahrah in view of Souers and Olson et al. (U.S. Patent No. 4,437,613, hereinafter "Olson"); and Claims 27-28 were rejected under 35 U.S.C. § 103(a) as unpatentable over Zahrah in view of Bottoms (U.S. Patent No. 3,780,887).

Initially, it is noted that, in the copy of the Form PTO-892 included with the outstanding Office Action, the Zahrah reference (U.S. Patent No. 6,402,500) cited by the Examiner in the Office Action is not listed on the form. Thus, it is respectfully requested that a copy of this form listing all of the references cited by the Examiner be provided with the next Office communication.

In response to the rejection under 35 U.S.C. § 112, second paragraph, the claims are hereby amended to cure the issues cited in the Office Action. In view of the amended claims, it is believed that all pending claims are definite and no further rejections on that basis are anticipated. However, if the Examiner disagrees, the Examiner is invited to telephone the

undersigned who will be happy to work with the Examiner in a joint effort to derive mutually acceptable language.

Turning now to the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), Applicant respectfully requests reconsideration of these rejections and traverses these rejections, as discussed below.

Amended Claim 16 recites:

A device for filling at least one mold with at least one powder,
the device comprising:

means for adding the at least one powder;

at least one means for ejecting the powder added into the
device in a form of a layer; and

at least one deflector placed above a precise location of the
mold, the at least one deflector configured to locally intercept at least
part of the powder ejected in the form of a layer and redirect locally
intercepted powder towards said precise location of the mold.

The device described in amended Claim 16 includes a deflector that changes the direction of the powder that collides with the deflector. The deflector is placed above a precise location of the mold, intercepts at least part of the ejected powder, and redirects this intercepted powder towards the precise location of the mold. It is respectfully submitted that the cited references do not disclose or suggest every feature recited in amended Claim 16.

Zahrah describes a delivery and filling system for filling a cavity with a particulate material. The system includes a mini-hopper 10, a transport device 102, and a gas control unit.¹ The mini-hopper 10 and the transport device each have a porous distributor plate 105, through which a gas can be flown.² In the system of Zahrah, only the bottom surface of the bed of particulate material present in the mini-hopper 10 and the transport device 102 becomes fluidized by migration of the compressed gas through the porous distributor plate

¹ See Zahrah, at col. 3, lines 8-9.

² See Zahrah, at col. 3, lines 10-27.

105, in order to prevent powder segregation and any dusting of fine particles.³ The central fluidizer 114 acts like a powder valve when the gas is turned on and off: when the gas is turned on, particulate material flows into the container and when gas is turned off, the flow of particulate material is cut-off immediately.⁴

A porous distributor plate 105 is placed at an incline to the side of the cavity 110.⁵ When the gas of the central fluidizer 114 is turned on, the powder 120 is freed from the central fluidizer 114, falls en masse into the space above the mold, and is funneled into the mold.⁶ According to Figure 4B of Zahrah, because the diameter of the volume of powder 120 present above the mold is larger than the diameter of the mouth of the cavity 110, the totality of the mold is filled at the same time.

However, it is respectfully submitted that Zahrah does not disclose or suggest “at least one means for ejecting the powder added into the device in a form of a layer; and at least one deflector placed above a precise location of the mold, the at least one deflector configured to locally intercept at least part of the powder ejected in the form of a layer and redirect locally intercepted powder towards said precise location of the mold,” as recited in amended Claim 16.

Instead, as seen in Figure 4B of Zahrah, when the gas is turned on, the powder is released from the delivery chute in particulate form. Zahrah further states that “the use of low gas pressure ensures that only a thin layer of powder near the porous distributor plate 152 *is loosened* to eliminate or minimize dusting and segregation.”⁷ Thus, the powder is not ejected “*in the form of a layer*” of powder, as recited in amended Claim 16.

Not only does the device of Zahrah not eject the powder in the form of a layer, according to Figures 4A and 4B of Zahrah, the porous distributor plate 105 is placed at an

³ See Zahrah, at col. 16, line 65 to col. 17, line 3.

⁴ See Zahrah, at col. 4, lines 32-37, at col. 12, lines 51-54, and at col. 8, lines 57-61.

⁵ See Zahrah, in Figure 4A.

⁶ See Zahrah, in Figures 4A and 4B.

⁷ See Zahrah, at col. 17, lines 42-47.

incline to the side of the cavity 110. Thus, the porous distributor plate 105 is not “placed above a precise location of the mold,” as recited in amended Claim 16. Because the plate 105 is not placed precisely above the mold, the plate 105 also cannot redirect powder in the form of a layer “towards said precise location of the mold.”

Accordingly, it is respectfully requested that the rejection of Claim 16, and all claims dependent thereon, as anticipated by Zahrah be withdrawn.

Regarding the rejections of Claims 17-30, it is noted that Claims 17-30 depend on Claim 16, and thus are believed to be patentable for at least the reasons discussed above with respect to Claim 16. Additionally, Applicant respectfully traverses the obviousness rejection based on Zahrah in view of Souers because there is no apparent reason to modify the apparatus of Zahrah by incorporating the rotating device of Souers. The Supreme Court in KSR states “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.”⁸ KSR further instructs an Examiner to “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”⁹ The Office Action is silent with respect to a reason to modify the apparatus of Zahrah by incorporating the rotating device of Souers. The apparatus of Zahrah teaches a method of uniformly distributing powder into a mold by using a gas flow. Thus, there is no apparent reason to modify the device of Zahrah.

Further, it is respectfully submitted that the remaining cited references (Souers, Olson, and Bottoms) do not cure any of the above-noted deficiencies of Zahrah. The apparatus in both Souers and Olson do not comprise a “deflector placed above a precise location of the mold, the at least one deflector configured to locally intercept at least part of the powder ejected in the form of a layer and redirect locally intercepted powder towards said precise

⁸ See KSR v. Teleflex, 127 S. Ct. 1727, 1741 (2007).

⁹ Id.

location of the mold.” Bottoms describes an apparatus for uniformly distributing heterogeneous particles in a vessel by amount and particle size *radially from an axis of rotation* at each level in the vessel.¹⁰ In the apparatus of Bottoms, there is no deflector at the exit of the powder distributing means: the dividers 7, 21 are inside the powder distributing means. Moreover, there is no deflector in Bottoms which intercepts at least part of the powder when the powder exits the powder distributing means.

Accordingly, it is respectfully submitted that the rejections of Claims 17-30 be withdrawn.

New Claims 31-35 are added by the present amendment. Support for new Claims 31-35 can be found in the original specification, for example, at page 9, lines 1-5 and 24-31, at page 10, lines 18-20, and in Figure 1. Thus, it is respectfully submitted that no new matter is added. New Claims 31-35 are dependent on Claim 16, and are thus believed to be patentable for at least the reasons discussed above with respect to Claim 16. Additionally, new Claim 33 recites, in part, “the powder is ejected in the form of a layer, deflected in the form of a layer, and enters a cavity of the mold in the form of a layer.” It is respectfully submitted that Zahrah does not teach the powder being ejected, deflected, and entering the cavity of the mold all in the form of a layer. Accordingly, it is respectfully submitted that new Claims 31-35 further patentably define over the cited references.

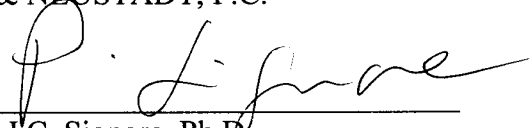
¹⁰ See Bottoms, at col. 1, lines 17-19.

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Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

A handwritten signature in black ink, appearing to read "P. J. Signore", is written over a horizontal line.

Philippe J.C. Signore, Ph.D.
Attorney of Record
Registration No. 43,922

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

Adnan H. Bohri
Registration No. 62,648